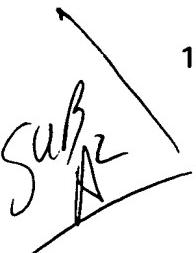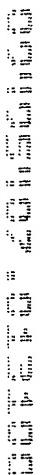What is claimed is:

1. An apparatus for monitoring a swing path and/or a golf club head angle at or near an impact location with a golf ball during a golf swing, comprising:

a first array of sensors arranged at an angle to the plane of the golf swing and proximate to the impact location;

a second array of sensors also arranged at an angle to the swing plane and spaced apart from the first array behind the impact position along the swing path;

an image capture device including a camera for capturing two or more images of the golf ball after impact with the golf club head; and

a processor for receiving signals indicative of a temporal profile of which sensors the golf club head is over for the duration of the swing and for determining one or more dynamic parameters of the golf ball based on said two or more images and for calculating one or more flight parameters of a total flight path of said golf ball based on said one or more dynamic parameters.

2. The apparatus of Claim 1, wherein said first and second arrays include a plurality of sensors arranged substantially linearly and orthogonal to said swing plane.

3. The apparatus of any of Claims 1 or 2, the processor further for recreating the swing path of the club head as the club head moved

between the first and second arrays during the swing based on said temporal profile.

4. The apparatus of Claim 3, wherein the swing path includes the take away swing path as the club head moved from the first array to the second array during the swing and the downswing path as the club head moved from the second array to the first array towards the impact location during the swing.

5. The apparatus of any of Claims 1 or 2, the processor further for recreating the club head angle as the club head moved across the first array toward the impact location based on said received signals.

6. The apparatus of Claim 5, wherein the first array includes a back sensor that is positioned just behind the substantially linearly arranged sensors in the first array along the swing path for determining the club head angle.

7. An apparatus for monitoring a golf club head angle at or near an impact location of the club head with a golf ball during a golf swing, comprising:

an array of sensors arranged at an angle to the plane of the golf swing;

an image capture device including a camera for capturing two or more images of the golf ball after impact with the golf club head; and

a processor for receiving signals indicative of a temporal profile of which sensors the golf club head is over for the duration of the swing and for determining one or more dynamic parameters of the golf ball based on said two or more images and for calculating one or more flight parameters of a total flight path of said golf ball based on said one or more dynamic parameters.

8. The apparatus of Claim 7, wherein said array includes a plurality of sensors arranged substantially linearly and orthogonal to said swing path.

9. The apparatus of Claim 8, wherein said array further includes a back sensor behind said plurality of substantially linearly arranged sensors.

10. The apparatus of any of Claims 7-9, the processor for recreating the club head angle as the club head was sensed over the array based on said temporal profile.

11. The apparatus of any of Claims 1 or 7, wherein said golf ball includes a marking that is at least partially in view of the camera for any rotational position of the golf ball.

12.   The apparatus of Claim 11, wherein said marking is substantially a straight line at least halfway circumambulatory of the surface of the golf ball.

13.   The apparatus of Claim 11, wherein said marking is a closed loop around the surface of the golf ball.

14.   The apparatus of Claim 13, wherein said marking separates substantially equal hemispheres of the golf ball.

15.   The apparatus of Claim 12, wherein said marking separates substantially equal hemispheres of the golf ball.

16.   The apparatus of Claim 12, wherein said processor automatically finds said marking and calculates a linear extrapolation of said marking for each of said images.

17.   The apparatus of Claim 16, wherein said processor calculates backspin on said ball based on a comparison of at least two of said linear extrapolations.

18.   The apparatus of Claim 17, wherein said processor calculates sidespin on said ball based at least in part on curvatures of said markings on said images.

19.   The apparatus of Claim 16, wherein said processor automatically finds a perimeter of at least one image and calculates a circumferential extrapolation of said image.

20.   The apparatus of Claim 19, wherein said processor determines diameters of said two or more images based on said circumferential extrapolations and calculates a three-dimensional velocity of said ball based in part on a comparison of said diameters.

21.   The apparatus of Claim 19, wherein said processor calculates a diameter based on said circumferential extrapolation and calculates a three dimensional velocity of said ball based in part on said diameter.

22.   The apparatus of Claim 12, wherein said processor automatically finds a perimeter of at least one image and calculates a circumferential extrapolation of said image.

23.   The apparatus of Claim 22, wherein said processor determines diameters of said two or more images based on said circumferential extrapolations and calculates a three-dimensional velocity of said ball based in part on a comparison of said diameters.

24.   The apparatus of Claim 22, wherein said processor calculates a

diameter based on said circumferential extrapolation and calculates a

three dimensional velocity of said ball based in part on said diameter.

25.   The apparatus of Claim 12, wherein said processor calculates

sidespin on said ball based in part on curvatures of said marking on

said images.

26.   · The apparatus of Claim 25, wherein said processor calculates a

circumferential extrapolation of two or more of said images.

27.   The apparatus of Claim 26, wherein said processor calculates

three-dimensions of velocity based in part on a comparison of

diameters of two or more of said circumferential extrapolations.

28.   The apparatus of Claim 27, wherein said processor calculates

sidespin based in part on curvatures of said marking on said images.

29.   The apparatus of Claim 11, wherein said one or more dynamic

parameters are selected from the group of dynamic parameters

consisting of backspin, sidespin and three-dimensional velocity.

30.   The apparatus of Claim 12, wherein said one or more dynamic

parameters are determined based on a diameter calculated based on an

automatic circumferential extrapolation of at least one image, the

curvature of the marking on at least one image, and automatic linear

extrapolations of the markings on at least two images.

31.   The apparatus of Claim 30, wherein said one or more dynamic

parameters include at least one of three-dimensional velocity, sidespin,

and backspin.

32.   The apparatus of Claim 11, wherein said one or more parameters

include sidespin.

33.   The apparatus of Claim 11, wherein said one or more parameters

include three dimensional velocity.

34.   An apparatus for determining one or more dynamic parameters of a

golf ball after impact with a golf club head based on two or more

images of said golf ball captured after said impact and for calculating

one or more parameters of a total flight path of said golf ball based on

said one or more dynamic parameters, comprising:

an image capture device including a camera for capturing two or

more images of the golf ball after impact with the golf club head; and

a processor connected with said image capture device,

wherein said golf ball has a marking that is at least halfway

circumambulatory of the surface of said golf ball such that said marking is

at least partially within the view of said camera for any rotational position of said golf ball when said images are taken, and

wherein said processor determines one or more dynamic parameters of said ball based on an automatic determination of at least one characteristic of at least one of said marking, a three-dimensional position of one or more of said images and a diameter of one or more of said images.

35.   The apparatus of Claim 34, further comprising one or more sensors for triggering the capturing of the images by the camera.

36.   The apparatus of Claim 35, wherein the one or more sensors are one or more photosensors that sense the club head as the club head moves past the one or more sensors during a downswing prior to impact with the ball.

37.   The apparatus of any of Claims 34 or 35, wherein said marking is a closed loop around the surface of the golf ball.

38.   The apparatus of Claim 37, wherein said marking separates substantially equal hemispheres of the golf ball.

39.   The apparatus of any of Claims 34 or 35, wherein said marking separates substantially equal hemispheres of the golf ball.

40. The apparatus of any of Claims 34 or 35, wherein said processor automatically finds said marking and calculates a linear extrapolation of said marking for each of said images.

41. The apparatus of Claim 40, wherein said processor calculates backspin on said ball based on a comparison of at least two of said linear extrapolations.

42. The apparatus of Claim 41, wherein said processor calculates sidespin on said ball based at least in part on curvatures of said markings on said images.

43. The apparatus of Claim 40, wherein said processor automatically finds a perimeter of at least one image and calculates a circumferential extrapolation of said image.

44. The apparatus of Claim 43, wherein said processor determines diameters of said two or more images based on said circumferential extrapolations and calculates a three-dimensional velocity of said ball based in part on a comparison of said diameters.

45. The apparatus of Claim 43, wherein said processor calculates a
diameter based on said circumferential extrapolation and calculates a
three dimensional velocity of said ball based in part on said diameter.

46. The apparatus of any of Claims 34 or 35, wherein said processor
automatically finds a perimeter of at least one image and calculates a
circumferential extrapolation of said image.

47. The apparatus of Claim 46, wherein said processor determines
diameters of said two or more images based on said circumferential
extrapolations and calculates a three-dimensional velocity of said ball
based in part on a comparison of said diameters.

48. The apparatus of Claim 46, wherein said processor calculates a
diameter based on said circumferential extrapolation and calculates a
three dimensional velocity of said ball based in part on said diameter.

49. The apparatus of any of Claims 34 or 35, wherein said processor
calculates sidespin on said ball based in part on curvatures of said
marking on said images.

50. The apparatus of Claim 49, wherein said processor calculates a
circumferential extrapolation of two or more of said images.

51.   The apparatus of Claim 50, wherein said processor calculates three-dimensions of velocity based in part on a comparison of diameters of two or more of said circumferential extrapolations.

52.   The apparatus of Claim 51, wherein said processor calculates sidespin based in part on curvatures of said marking on said images.

53.   The apparatus of any of Claims 34 or 35, wherein said one or more dynamic parameters are selected from the group of dynamic parameters consisting of backspin, sidespin and three-dimensional velocity.

54.   The apparatus of any of Claims 34 or 35, wherein said one or more dynamic parameters are determined based on a diameter calculated based on an automatic circumferential extrapolation of at least one image, the curvature of the marking on at least one image, and automatic linear extrapolations of the markings on at least two images.

55.   The apparatus of Claim 54, wherein said one or more dynamic parameters include at least one of three-dimensional velocity, sidespin, and backspin.

56.   The apparatus of any of Claims 34 or 35, wherein said one or more dynamic parameters include sidespin.

57.   The apparatus of any of Claims 34 or 35, wherein said one or more dynamic parameters include three-dimensional velocity.

58.   The apparatus of Claim 34, further comprising two sensors, said processor for receiving signals indicative of when the golf club is detected by each of the two sensors and estimating when the golf ball will be within a view of said camera for capturing said one or more images based on the received signals.

59.   The apparatus of any of Claims 35-36, wherein said one or more sensors include at least two sensors, wherein said processor receives signals indicative of when the golf club is detected by each of the at least two sensors and estimates when the golf ball will be within a view of said camera for capturing said one or more images based on the received signals.

60.   An apparatus for determining one or more dynamic parameters of a golf ball after impact with a golf club head based on two or more images of said golf ball captured after said impact and for calculating one or more parameters of a total flight path of said golf ball based on said one or more dynamic parameters, comprising:

an image capture device including a camera for capturing two or more images of the golf ball after impact with the golf club head; and

a processor connected with said image capture device for automatically determining and comparing three-dimensional spatial positions of said two or more images and calculating a three-dimensional velocity based in part on said three-dimensional spatial position determination and comparison.

61. The apparatus of Claim 60, wherein said processor automatically determines circumferential extrapolations of perimeters of said images from which said three-dimensional spatial positions are determined.

62. The apparatus of Claim 60, wherein said three-dimensional spatial positions are determined based at least in part on a determination of diameters of said images.

63. The apparatus of Claim 62, wherein said processor automatically determines circumferential extrapolations of perimeters of said images from which said diameters are determined.

64. An apparatus for determining one or more dynamic parameters of a golf ball after impact with a golf club head based on one or more images of said golf ball captured after said impact and for calculating

one or more parameters of a total flight path of said golf ball based on

said one or more dynamic parameters, comprising:

an image capture device including a camera for capturing one or

more images of the golf ball after impact with the golf club head; and

a processor connected with said image capture device for

determining a three-dimensional spatial position of the geometric center of

at least one image and calculating a three-dimensional velocity based in

part on said three-dimensional spatial position determination.

65.   The apparatus of Claim 64, wherein said processor automatically

determines a circumferential extrapolation of a perimeter of said image

from which said three-dimensional spatial position is determined.

66.   The apparatus of Claim 65, wherein said processor automatically

determines the diameter of said image based on said circumferential

extrapolation, and determines said three-dimensional spatial position

based on said diameter determination.

67.   The apparatus of any of Claims 64-66, wherein said three-

dimensional velocity is also based at least in part on a timing from a

timing of impact to a timing of capturing of said image.

68. The apparatus of Claim 67, wherein said three-dimensional velocity is also based on a three-dimensional spatial position of said ball at said impact location.

69. An apparatus for determining one or more dynamic parameters of a golf ball after impact with a golf club head based on two or more images of said golf ball captured after said impact and for calculating one or more parameters of a total flight path of said golf ball based on said one or more dynamic parameters, comprising:

a first and a second sensors spaced-apart along a golf swing path for detecting a golf club head at two different points during a downswing portion of a golf swing;

an image capture device including a camera for capturing one or more images of the golf ball after impact with the golf club head; and

a processor for receiving signals indicative of when the golf club is detected by each of the two sensors and estimating when the golf ball will be within a view of said camera for capturing said one or more images.

70. The apparatus of Claim 69, at least one of said sensors further for triggering the capturing of the images by the camera.

71. The apparatus of any of Claims 69 or 70, wherein the one or more sensors are one or more photosensors that sense the club head as the

club head moves past the one or more sensors during a downswing prior to impact with the ball.

72.   The apparatus of Claim 70, wherein said at least one of said sensors triggers a shuttering of said camera.

73.   The apparatus of any of Claims 70 or 72, wherein said at least one of said sensor triggers a flashing of one or more flashlamps of said camera.

74.   An apparatus for determining one or more dynamic parameters of a golf ball after impact with a golf club head based on two or more images of said golf ball captured after said impact and for calculating one or more parameters of a total flight path of said golf ball based on said one or more dynamic parameters, comprising:

a first and a second sensors spaced-apart along a golf swing path for detecting a golf club head at two different points during a downswing portion of a golf swing;

an image capture device including a camera for capturing two or more images of the golf ball after impact with the golf club head; and

a processor for receiving signals indicative of when the golf club is detected by each of the two sensors, calculating the speed of the club head during the downswing, calculating one or more dynamic parameters of the golf ball based on said two or more images and

calculating the transfer efficiency of the club head to the golf ball at

impact based at least in part on said club head speed and said one or

more dynamic parameters of said golf ball.

75.   The apparatus of Claim 74, wherein said one or more dynamic

parameters include three-dimensional velocity, backspin and sidespin.

76.   The apparatus of Claim 74, wherein said transfer efficiency is

determined relative to other transfer efficiencies determined for other

impacts of other golf swings.

77.   The apparatus of any of Claims 60, 64, 69 or 74, wherein said golf

ball has a marking that is at least halfway circumambulatory of the

surface of said golf ball such that said marking is at least partially within

the view of said camera for any rotational position of said golf ball when

said images are taken.

78. 77.   The apparatus of Claim 77, wherein said marking is substantially a

straight line within the plane of the surface of the ball.

79. 78.   The apparatus of Claim 77, wherein sidespin on said golf ball is

determined based on curvatures of said marking in said images.

79. The apparatus of Claim 77, wherein said processor automatically finds said markings are calculates linear extrapolations of said markings in said images and determines backspin based on a comparison of said linear extrapolations.

80. The apparatus of Claim 77, wherein said processor automatically determines a circumferential extrapolation of at least one image, calculates a three-dimensional spatial position from said circumferential extrapolation and determines a three-dimensional velocity based at least in part on said three-dimensional spatial position.

81. The apparatus of Claim 80, wherein said processor calculates a diameter of said at least one image from said circumferential extrapolation and calculates said three-dimensional extrapolation based in part on said diameter.

82. The apparatus of any of Claims 1, 7, 34, 60, 64, 69 or 74, wherein said apparatus also captures an image of said golf ball and said golf club at impact such that the relative orientation of said club with respect to said ball may be evaluated.